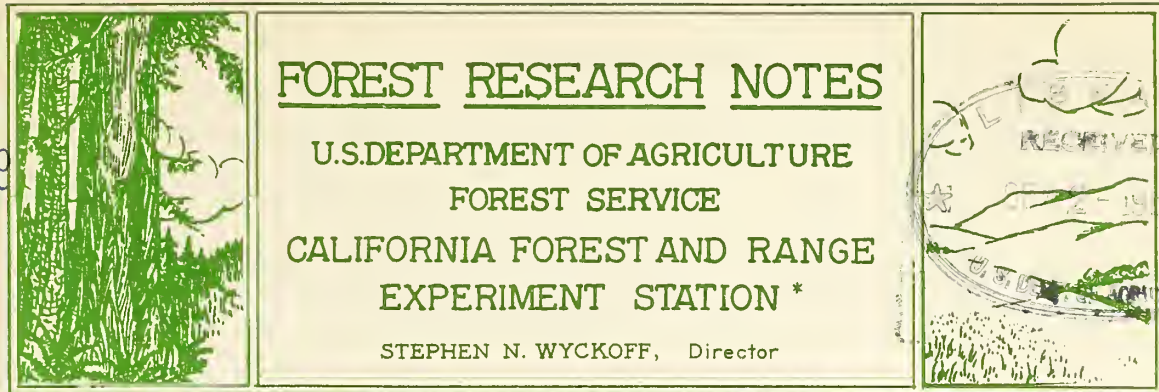


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CHECK LIST FOR INSPECTION OF LUMBER DRY KILNS

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Lumber dry kilns are production machines that require careful attention and maintenance to keep them in good working order. Too often, too much is taken for granted regarding their general operating condition, and they fall into a state of disrepair that makes good drying difficult or outright impossible. This note suggests one type of check list that may be used as a guide for use by the kiln operator or other qualified person in making routine inspections of buildings and equipment. Management may also find this form useful in having inspections made and reported at regular intervals.

The need for such regular inspection was forcefully revealed by kiln certification studies of all types of kilns, made during the war by technicians from the Forest Products Laboratory, Madison, Wisconsin. Many kilns could not meet the established requirements because poor maintenance or faulty adjustment of kiln parts made accurate control of temperature and humidity impossible. This study provided the basis for the attached check list.

Periodic examination of the kiln building and kiln equipment may reveal faulty conditions that can be corrected immediately at little cost. Neglect of these conditions can lead to expensive repairs or replacements. For example, poor drying may result from as simple an oversight as failure to replace the wet-bulb wick regularly, thus allowing the old wick to become incrustated with debris that results in faulty humidity control. Lack of proper air baffles, either because of omission from the original installation or because of poor repair of existing equipment, may lead to greatly reduced air circulation through the loads of lumber. Leaks in the steam heating and spray systems may waste steam and necessitate excessive venting. Water-logged coils and traps may result in uneven heating throughout the kiln, which in turn will cause uneven drying. Such examples can be cited for most of the items listed in the check list.



## KILN INSPECTION CHECK LIST

(Where maintenance or replacement is recommended, indicate kiln number.)

### I. AIR CIRCULATION SYSTEM

1. Fans and motors, present condition: \_\_\_\_\_  
Condition of electrical connections and switches: \_\_\_\_\_  
What maintenance or replacement is recommended: \_\_\_\_\_
2. Shafts and bearings, present condition: \_\_\_\_\_  
Are motor and shaft bearings properly lubricated: \_\_\_\_\_  
What maintenance or replacement is recommended: \_\_\_\_\_
3. Fan baffles, present condition: \_\_\_\_\_  
What maintenance or replacement is recommended: \_\_\_\_\_
4. Load baffles, present condition: \_\_\_\_\_  
Can load baffles be improved: \_\_\_\_\_  
What maintenance or replacement is recommended: \_\_\_\_\_
5. Air passageways  
Are air passageways open and unobstructed: \_\_\_\_\_  
Could air movement be improved: \_\_\_\_\_  
What maintenance or replacement is recommended: \_\_\_\_\_

### II. HEATING AND HUMIDIFYING SYSTEM

1. Feed lines and header, present condition: \_\_\_\_\_  
Are they properly insulated: \_\_\_\_\_  
What maintenance or replacement is recommended: \_\_\_\_\_
2. Heating coils, present condition: \_\_\_\_\_  
Are all pipes open to full flow of steam: \_\_\_\_\_  
Condition of supports: \_\_\_\_\_  
What maintenance or replacement is recommended: \_\_\_\_\_
3. Traps, present condition: \_\_\_\_\_  
Are traps in best possible location: \_\_\_\_\_  
What maintenance or replacement is recommended: \_\_\_\_\_
4. Hand valves and automatic control valves, present condition: \_\_\_\_\_  
Are hand valves provided for blowing out coils: \_\_\_\_\_  
Are hand valves provided for shutting off individual coils: \_\_\_\_\_  
Are check valves working properly: \_\_\_\_\_  
What maintenance or replacement is recommended: \_\_\_\_\_
5. Spray lines, present condition: \_\_\_\_\_  
Are spray holes or nozzles open: \_\_\_\_\_  
Does condensate from spray line drip on lumber: \_\_\_\_\_  
What maintenance or replacement is recommended: \_\_\_\_\_

(over)



## II. HEATING AND HUMIDIFYING SYSTEM (continued)

### 6. Vents, present condition:

Do vents open and close properly: \_\_\_\_\_

What maintenance or replacement is recommended: \_\_\_\_\_

## III. CONTROL SYSTEM

### 1. Recorder-controller, present condition:

Is recorder-controller properly calibrated: \_\_\_\_\_

Are capillary tubes protected: \_\_\_\_\_

Are bulbs properly located and mounted for accurate readings of kiln conditions: \_\_\_\_\_

What maintenance or replacement is recommended: \_\_\_\_\_

### 2. Water supply

Is water supply line to wet bulb open: \_\_\_\_\_

Is wet-bulb water pan clean: \_\_\_\_\_

Is drain line from water pan open: \_\_\_\_\_

Is wet-bulb wick replaced regularly: \_\_\_\_\_

What maintenance or replacement is recommended: \_\_\_\_\_

### 3. Air supply

Is supply adequate, clean, and uninterrupted: \_\_\_\_\_

Is compressor in good condition: \_\_\_\_\_

Are water and grease traps in good condition: \_\_\_\_\_

What maintenance or replacement is recommended: \_\_\_\_\_

## IV. BUILDING

### 1. Doors, present condition:

What maintenance or replacement is recommended: \_\_\_\_\_

### - 2. Walls, present condition:

Is protective coating adequate: \_\_\_\_\_

What other maintenance is recommended: \_\_\_\_\_

### 3. Ceilings, present condition:

Is protective coating adequate: \_\_\_\_\_

What other maintenance is recommended: \_\_\_\_\_

### 4. Floors and walkways, present condition:

What maintenance or replacement is recommended: \_\_\_\_\_

### 5. Rails and supports, present condition:

What maintenance or replacement is recommended: \_\_\_\_\_

## V. GENERAL CONDITIONS OF YARD AND KILNS

Are yard tracks and transfer in good condition: \_\_\_\_\_

Are kiln trucks in good condition: \_\_\_\_\_

What maintenance or replacement is recommended: \_\_\_\_\_

Are kilns and surrounding area neat and clean: \_\_\_\_\_